

RAW SEQUENCE LISTING

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Application Serial Number: 10/768,951
Source: IFWO
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IFWO

RAW SEQUENCE LISTING

DATE: 03/18/2005

PATENT APPLICATION: US/10/768,951

TIME: 10:39:32

Input Set : A:\SEQLIST.txt

Output Set: N:\CRF4\03182005\J768951.raw

3 <110> APPLICANT: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
 5 <120> TITLE OF INVENTION: STABLE GENE VARIANTS OF LIPASES
 7 <130> FILE REFERENCE: 71914
 9 <140> CURRENT APPLICATION NUMBER: US 10/768,951
 10 <141> CURRENT FILING DATE: 2004-01-29
 12 <160> NUMBER OF SEQ ID NOS: 12
 14 <170> SOFTWARE: PatentIn version 3.1
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 181
 18 <212> TYPE: PRT
 19 <213> ORGANISM: Bacillus subtilis
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 23 <222> LOCATION: (1)..(181)
 24 <223> OTHER INFORMATION: enzyme sequence
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 33 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
 34 20 25 30
 37 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
 38 35 40 45
 41 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
 42 50 55 60
 45 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
 46 65 70 75 80
 49 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
 50 85 90 95
 53 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
 54 100 105 110
 57 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
 58 115 120 125
 61 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
 62 130 135 140
 65 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
 66 145 150 155 160
 69 Tyr Ser Ser Gln Val Asn Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
 70 165 170 175
 73 Gly Gln Asn Thr Asn
 74 180
 77 <210> SEQ ID NO: 2
 78 <211> LENGTH: 181
 79 <212> TYPE: PRT

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84 <222> LOCATION: (1)..(181)
85 <223> OTHER INFORMATION: Protein sequence
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94 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
95 20 25 30
98 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
99 35 40 45
102 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
103 50 55 60
106 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
107 65 70 75 80
110 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
111 85 90 95
114 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
115 100 105 110
118 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
119 115 120 125
122 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
123 130 135 140
126 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
127 145 150 155 160
130 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
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134 Gly Gln Asn Thr Asn
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146 <223> OTHER INFORMATION: Protein sequence
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155 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
156 20 25 30
159 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
160 35 40 45
163 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
164 50 55 60
167 Asp Glu Thr Gly Val Lys Lys Val Asp Ile Val Ala His Ser Met Gly
168 65 70 75 80

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171 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
172           85           90           95
175 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
176           100          105          110
179 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
180           115          120          125
183 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
184           130          135          140
187 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
188 145          150          155          160
191 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
192           165          170          175
195 Gly Gln Asn Thr Asn
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200 <211> LENGTH: 181

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204 <220> FEATURE:

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206 <222> LOCATION: (1)..(181)

207 <223> OTHER INFORMATION: Protein Sequence

210 <400> SEQUENCE: 4

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217           20           25           30
220 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
221           35           40           45
224 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
225           50           55           60
228 Asp Glu Thr Gly Thr Lys Lys Val Asp Ile Val Ala His Ser Met Gly
229 65           70           75           80
232 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
233           85           90           95
236 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
237           100          105          110
240 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
241           115          120          125
244 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
245           130          135          140
248 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
249 145          150          155          160
252 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
253           165          170          175
256 Gly Gln Asn Thr Asn
257           180
260 <210> SEQ ID NO: 5
261 <211> LENGTH: 181

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268 <223> OTHER INFORMATION: Protein Sequence
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277 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
278 20 25 30
281 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
282 35 40 45
285 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
286 50 55 60
289 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
290 65 70 75 80
293 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
294 85 90 95
297 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
298 100 105 110
301 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
302 115 120 125
305 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
306 130 135 140
309 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
310 145 150 155 160
313 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
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326 <220> FEATURE:
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328 <222> LOCATION: (1)..(181)
329 <223> OTHER INFORMATION: Protein sequence
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335 1 5 10 15
338 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp
339 20 25 30
342 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
343 35 40 45
346 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
347 50 55 60
350 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly

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351 65          70          75          80
354 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
355          85          90          95
358 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
359          100          105          110
362 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
363          115          120          125
366 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
367          130          135          140
370 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
371 145          150          155          160
374 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
375          165          170          175
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389 <222> LOCATION: (1)..(181)
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400          20          25          30
403 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr
404          35          40          45
407 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
408          50          55          60
411 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
412 65          70          75          80
415 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
416          85          90          95
419 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
420          100          105          110
423 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
424          115          120          125
427 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
428          130          135          140
431 Asp Gly Ala Ser Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
432 145          150          155          160
435 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly
436          165          170          175
439 Gly Gln Asn Thr Asn
440          180
443 <210> SEQ ID NO: 8

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VERIFICATION SUMMARY

DATE: 03/18/2005

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TIME: 10:39:33

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